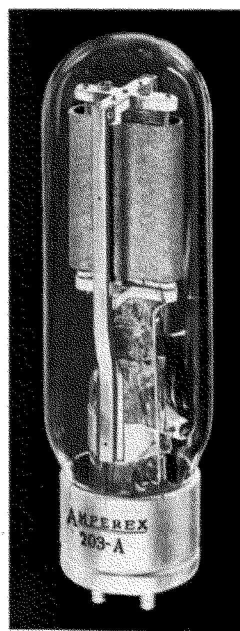
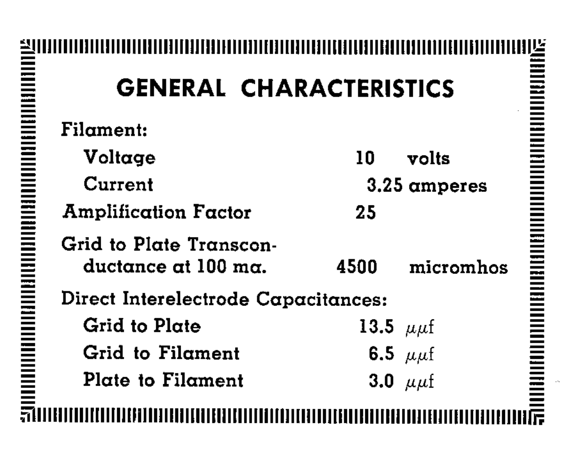


R.F. Power Amplifier, Oscillator, A.F. Power Amplifier, Modulator

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS



GENERAL CHARACTERISTICS

Filament:		
Voltage	10	volts
Current	3.25	amperes
Amplification Factor	25	
Grid to Plate Transconductance at 100 ma.	4500	micromhos
Direct Interelectrode Capacitances:		
Grid to Plate	13.5	$\mu\mu f$
Grid to Filament	6.5	$\mu\mu f$
Plate to Filament	3.0	$\mu\mu f$

A.F. Power Amplifier or Modulator—Class B

	Maximum Rating per Tube	Typical Operation Two Tubes	
A.C. Filament Voltage	..	10	10
D.C. Plate Voltage	1250	1000	1250
D.C. Grid Voltage	..	−35	−45
Load Resistance (per tube) (ohms)	..	1725	2250
Effective Load Resistance (Plate to Plate) (ohms)	..	6900	9000
Zero Signal Plate Current (ma.)	..	26	26
Peak A.F. Grid to Grid Voltage	..	270	300
Max. Signal D.C. Plate Current (ma.)	175	320	320
Max. Signal Plate Input (watts)	220	320	400
Plate Dissipation (watts)	100	..	..
Max. Signal Driving Power (Approx.) (watts)	..	5	7
Max. Signal Plate Power Output (watts)	..	216	280

R.F. Power Amplifier—Class B—Telephony

(Carrier conditions for use with modulation factor of 1.0)

	Maximum Rating per Tube	Typical Operation One Tube	
A.C. Filament Voltage	..	10	10
D.C. Plate Voltage	1250	1000	1250
D.C. Grid Voltage	..	−20	−37
Peak R.F. Grid Voltage	..	80	85
D.C. Plate Current (ma.)	150	130	116
Plate Input (watts)	150	130	145
Plate Dissipation (watts)	100	90	95
D.C. Grid Current (Approx.) (ma.)	..	5	4.5
Driving Power at Peak Modulation (Approx.) (watts)	..	2	3
Plate Power Output (watts)	..	40	50
Frequency Limit for Above Operation (megacycles)	15	20	15

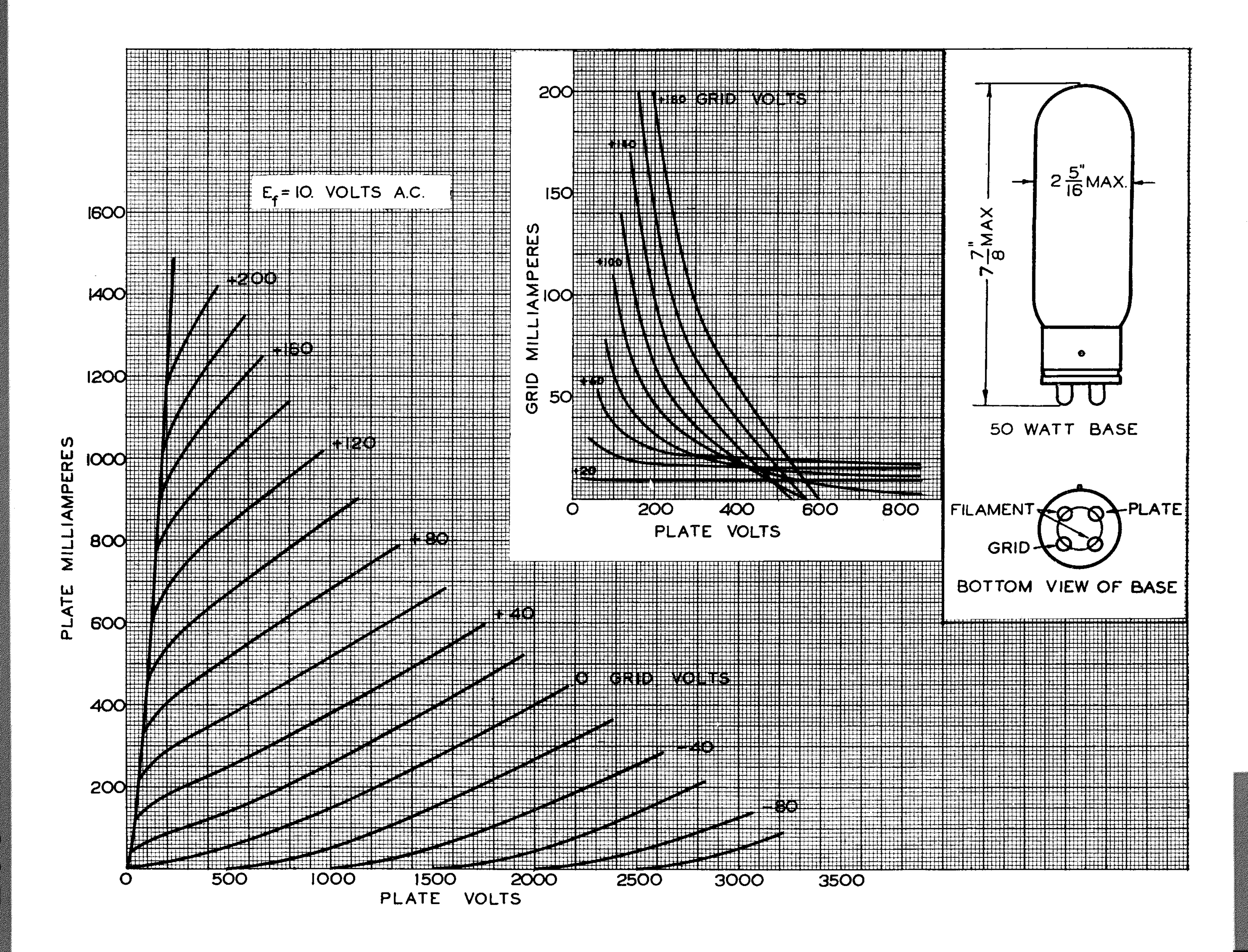
Plate Modulated R.F. Power Amplifier Class C—Telephony

(Carrier conditions for use with modulation factor of 1.0)

	Maximum Rating per Tube	Typical Operation One Tube	
A.C. Filament Voltage	..	10	10
D.C. Plate Voltage	1000	750	1000
D.C. Grid Voltage	−400	−100	−135
Peak R.F. Grid Voltage	..	230	265
D.C. Plate Current (ma.)	175	150	150
Plate Input (watts)	175	112	150
Plate Dissipation (watts)	67	37	40
D.C. Grid Current (Approx.) (ma.)	60	25	20
Driving Power (Approx.) (watts)	..	5	5
Plate Power Output (watts)	..	75	110
Frequency Limit for Above Operation (megacycles)	15	30	15
F.C.C. Broadcast Rating (watts)	75	..	75

R.F. Power Amplifier or Oscillator—Class C Telegraphy

	Maximum Rating per Tube	Typical Operation One Tube	
A.C. Filament Voltage	..	10	10
D.C. Plate Voltage	1250	1000	1250
D.C. Grid Voltage	−400	−135	−150
Peak R.F. Grid Voltage	—	265	280
D.C. Plate Current (ma.)	175	160	170
Plate Input (watts)	220	160	212
Plate Dissipation (watts)	100	40	60
D.C. Grid Current (Approx.) (ma.)	60	18	11
Driving Power (Approx.) (watts)	..	5	3
Plate Power Output (watts)	..	120	152
Frequency Limit for Above Operation (megacycles)	15	30	15


E_f = 10. VOLTS A.C.
PLATE MILLIAMPERES
1600
1400
1200
1000
800
600
400
200
+200
+160
+120
+80
+40
0 GRID VOLTS
-40
-80
0
500
1000
1500
2000
2500
3000
3500
PLATE VOLTS
GRID MILLIAMPERES
200
150
100
50
+180 GRID VOLTS
0
200
400
600
800
PLATE VOLTS
7 7/8" MAX
2 5/16" MAX.
50 WATT BASE
FILAMENT
PLATE
GRID
BOTTOM VIEW OF BASE